REMARKS

The Applicant has now had an opportunity to carefully consider the comments set forth in the Office Action that was mailed March 8, 2007. The acknowledgement of allowable subject matter in **claims 17** and **18** is noted with appreciation. Additionally, it is noted that the Detailed Action provides no discussion of **claims 7-9**. Accordingly, it is respectfully submitted that the Office may have intended to indicate that **claims 7-9** include allowable subject matter.

Nevertheless, the rejection of **claims 4-6**, **10-16** and **19-23**, in view of U.S. Patent No. 5,680,723 to Kaburagi, et al., which was cited once before in the Office Action that was mailed November 18, 2003 and addressed in Applicant's Amendment B, which was mailed on February 18, 2004, is respectfully traversed. Amendment, reexamination and reconsideration of the application are respectfully requested.

The Office Action

In the Office Action mailed March 8, 2007:

claims 17 and **18** were indicated to include allowable subject matter;

claims 7-9 were not addressed with regard to matters of substance;

claims 4-9 and **21-23** were rejected under 35 U.S.C. §101 for allegedly reciting non-statutory subject matter; and

claims 4-6, **10-16** and **19-23** were rejected under 35 U.S.C. §102(b) as being anticipated by U.S. Patent No. 5,680,230 to Kaburagi, et al. ("Kaburagi").

The Present Application

For purposes of brief review, the present application is directed to a method and system for rendering single colorant versions of color images while preserving as much information from the color image as possible and minimizing image distortion. For example, the present application is directed to a system and method for rendering black and white versions of color images. Typical color image authoring devices can produce over 16 million different colors, while typical black and white rendering devices can only produce 256 shades of gray. Obviously, in rendering black and white versions of color images, a great number of colors must be mapped to each level of gray. Therefore, portions of a color image that are quite obviously different colors can appear to be the same color

when the image is rendered in black and white.

When the image portions in question are, for example, different sections of a pie chart or bar graph, this loss of information can render the chart or graph useless (page 2, lines 5-12). The systems and methods of the present application address this problem by analyzing an image to find colors in the image that would otherwise be rendered in the same manner and altering the rendering process for one or more **of the conflicting colors** so that the distinctiveness of those portions of the color image comprised of the colors that conflict in black and white can be preserved in the black and white version of the image. For instance, the rendering process is altered by adding a texture **to portions of the black and white version of the image that represent one or more of the conflicting colors** (e.g., compare Fig. 1, 122, 126 to Fig. 9, 922, 926). For example, the texture is applied through spatial modulation. Spatial modulation may be achieved through the application of selected half tone screens. For instance, the black and white version of a first conflicting color may be rendered using a first line screen and the black and white representation of a second conflicting color may be rendered with a different or second line screen. Subtle imaging artifacts associated with the selected screens (e.g., the striping visible in Fig. 9) restores some of the distinctiveness of the different colors in the original color image that would have otherwise been lost (e.g., Fig. 1, 122, 126). It is to be noted that the texturing or spatial modulation notwithstanding, the lightness of the rendered conflicting colors is not altered. Therefore, the lightness of the colors in the original image is preserved in the rendered black and white version of the image. Furthermore, portions of the black and white image that are not associated with conflicting colors remain unaffected. Therefore, deleterious effects of the process are minimized, thereby allowing the methods of the present application to be applied in a default or "walk-up" mode of an image processor, such as, for example, a photocopier.

The Cited Reference

In contrast, the primary reference of the Office Action to Kaburagi allegedly discloses an image processing method and apparatus wherein, if a full colored original is presented in two colors for output, some areas may appear in the same color. In the case of, for example, the red image data shown in FIG. 16B, it is

easily known that magenta and yellow have the same density with the red reference axis as a symmetrical axis. Therefore, the apparatus of Kaburagi solves the problem of such same color presentation by setting the parameters (the reference axis and the range of density spreading), which prevent the same color production (column 13, lines 9-17). Consequently, the density values of these two points (magenta and yellow) are changed. Specifically, as shown in the example of FIG. 17C, magenta is made more dark than yellow by shifting the reference axis (column 13, lines 54-58).

It is respectfully submitted that **this procedure of Kaburagi changes or distorts all the colors (or shades of grey) in the output image**. Furthermore, Kaburagi does not disclose or suggest a solution for the case where the input color image includes a plurality of colors that will conflict in the output image or the case where shifting the axis actually creates conflicting colors. For example, if the input image also includes objects that are colored light magenta and dark yellow, which, because of their different luminance, would not have been conflicting, shifting the axis to darken magenta and lighten yellow can cause those objects to be rendered at the same density and, therefore, conflict!

Kaburagi discloses using patterns for some purpose. However, Kaburagi does not disclose or suggest using patterns to maintain the distinctiveness of colors in a color image in a single colorant version of that image. Instead, Kaburagi discloses using the same pattern in rendering single colorant versions of colors having the same luminance level. For example, Kaburagi discloses that colors having a luminance level ranging from 10H to 20H are assigned x, y, z parameter values of 0, 0, 1, respectively. FIG. 46 indicates that colors assigned x, y, z parameter values of 0, 0, 1 are all rendered with the same pattern (the one in the upper left hand corner of the figure). Alternatively, see FIG. 47A – FIG. 47D, which indicate that all colors having a luminance level that is assigned the parameter values 0, 0, 1 are rendered as the pattern shown in FIG. 47B.

Furthermore, Kaburagi does not disclose or suggest applying the patterns only to conflicting colors. Instead, as shown in FIG. 44, Kaburagi discloses assigning a set of parameter values to all luminance levels from 00H – FFH (column 30, line 65 – column 31, line 15).

The Applicants note that in this last portion of Kaburagi, the references to the figures are incorrect. For example, it is respectfully submitted that where the

specification refers to FIG. 42, it means to refer to FIG. 43, where the specification refers to FIG. 43, it means to refer to FIG. 44, and so on.

Telephone Interviews of Early 2004

During a telephone interview held on or about January 22, 2004, the previous Examiner, Montilewa Good-Johnson, and the Applicant's representative, Thomas Tillander, discussed proposed claim amendments and the Kaburagi reference. Mr. Tillander made reference to column 13 of Kaburagi, as discussed above, wherein Kaburagi explains that in the method of Kaburagi when colors having the same "density" are detected, Kaburagi solves the problem of such same color presentation by setting the parameters (the reference axis and the range of density spreading), which prevent the same color production (column 13, lines 9-17). Mr. Tillander submitted that Kaburagi does not disclose or suggest applying spatial modulation to, for example, the magenta and/or yellow portions of an image so that a black and white version of the image can be made with a minimum of distortion. Instead, Mr. Tillander pointed out, Kaburagi changes the reference axis and the range of density spreading, which has the effect of distorting the luminance of all the color of an image (column 13, lines 53-60).

The reference to column 31 of Kaburagi of the then pending Office Action, as well as the Office Action of November 18, 2003, was also discussed. The reference section is related to the patterns shown in FIG. 46. Mr. Tillander submitted that FIG. 44 makes it clear that Kaburagi discloses applying a pattern for every luminance level in an image and **not just to conflicting colors**. Furthermore, Kaburagi discloses applying **the same** pattern to colors having the same luminance (i.e., conflicting colors) (e.g., FIG. 44 shows all colors having luminance values in the range of 00H to 10H are assigned the pattern associated with (0, 0, 0) in FIG. 46) **and does not disclose or suggest applying different or distinct patterns to one or more black and white version of one or more conflicting colors**.

Independent claims 4, 10 and 21 were discussed in view of the information described above. Mr. Tillander submitted that, in a proposal amendment, claim 4 included applying spatial modulation only to black and white versions of one or more conflicting color and not to colors that don't conflict. Similar elements in

claims 10 and 21 were also discussed.

The Examiner said she was not able to provide guidance as to the allowability of the proposed amended claims and that she would discuss the case with a colleague and contact Mr. Tillander at a later date.

On or about January 30, 2004, Mr. Tillander contacted the Examiner to inquire as to the status of the discussion with the colleague. Nothing of substance was discussed.

On or about February 10, 2004, the Examiner contacted Mr. Tillander and said the case would be discussed with the colleague on the following day. The substance of the January 22 interview was briefly reviewed.

On February 17, 2004, the Examiner contacted Mr. Tillander and indicated that she had discussed the case with Joseph Mancuso and that the claims would not be allowed in the proposed form. The Examiner made reference to the phrase --at least one-- that occurred in the proposed amendment to claims 4 several times. Mr. Tillander directed the attention of the Examiner to the phrase --**and only to,** at least one respective single colorant version of a conflicting color-- and reminded the Examiner that Kaburagi discloses applying patterns to all colors of an image not just conflicting ones and that Kaburagi discloses **applying the same pattern to colors that have the same luminance** (i.e., conflicting colors) and does not disclose or suggest applying patterns in order to distinguish one conflicting color from another. No agreement was reached. However, it is noted that Kaburagi was eventually dropped as a reference against the claims of the present application.

The Claims are Statutory

Claims 4-9 and **21-23** were rejected under 35 U.S.C. §101 for allegedly reciting non-statutory subject matter. In particular, the Office Action asserts that **claims 4** and **21** do not include claim language which indicates a manipulation of data for output to a computer display that physically transforms the article or object to a different state or thing. Therefore, the Office Action asserts that claim language does not present a practical application by physical transformation or production of a useful, concrete and tangible result to form the basis of statutory subject matter under 35 U.S.C. §101.

However, independent **claims 4** and **21** have been amended to recite respective methods for preparing an image described in a multicolor color space for rendering in a single colorant color space, the methods comprising *inter alia*: at least one of storing and rendering the single colorant version for the modulated single colorant version of the image, respectively.

Accordingly, it is respectfully submitted that for at least these reasons, **claims 4-9** and **21-23** recite statutory subject matter and withdrawal of the rejections under 35 U.S.C. §101 is respectfully requested.

The Claims are not Anticipated

Claims 4-6, **10-16** and **19-23** were rejected under 35 U.S.C. §102(b) as being anticipated by Kaburagi.

In explaining the rejection of **claim 4**, the Office Action directs the attention of the Applicant to FIGS. 46 and 47 and portions of column 31 and 32 in support of assertions that Kaburagi discloses applying at least one distinct spatial modulation to, and only to, at least one respective single colorant version of at least one of the conflicting colors, thereby ensuring that all single colorant versions in the image are visually distinguishable from one another while minimizing distortions in a remainder of the single colorant version of the image.

However, Kaburagi does not disclose or suggest applying at least one distinct spatial modulation to, **and only to**, at least one respective single-colorant version of at least one of the conflicting colors, thereby ensuring that all single-colorant versions of colors in the image **are visually distinguishable from one another** while minimizing distortions in a remainder of the single-colorant version of the image. Instead, in the "fifth embodiment" (column 29, lines 10-11; column 31, lines 15-20) luminance signals 00H to FFH are divided for every 10H and assigned to parameters of a three-dimensional table (referred to by Kaburagi as FIG. 43; however, it is respectfully submitted that this is an intended reference to FIG. 44) (column 30, lines 65-67). The parameters of the table include x for a pattern interval, y for a pattern density and z for a pattern area (column 30, line 37 – column 31, line 2). Accordingly, in this fifth embodiment of Kaburagi, every luminance level is associated with a pattern. Therefore, Kaburagi does not disclose or suggest applying at least one distinct spatial modulation **only to** single-colorant versions of conflicting colors. Instead, it is respectfully submitted

that Kaburagi discloses applying a pattern for every color in an image. Therefore, the method of Kaburagi distorts the entire image and does not minimize distortion to the remainder of the image, as recited in **claim 4**.

Furthermore, as indicated in FIG. 44 of Kaburagi, colors associated with the same luminance are associated with the same patterns. Therefore, Kaburagi does not disclose or suggest applying at least one **distinct** spatial modulation to, and only to, at least one respective single-colorant version of at least one of the conflicting colors, thereby ensuring that all single-colorant versions of colors in the image **are visually distinguishable** from one another.

Column 31, lines 35-41, indicate that "though a pattern to be outputted in accordance with the degree of the luminance signal level is selectively determined in the above embodiments, the edge of the image is extracted from a density variation of the original image, the area is divided at the edge as a border and the pattern is changed for each area in these comparative examples." Column 31, line 65 – column 32, line 4, indicates that "if a plurality of colors can be developed, the pattern is determined independently in accordance with the color. If monochrome photoelectric conversion devices are used, exposure is repeated several times by varying the light quantity of the exposure means, a change of signals from the photoelectric conversion device due to repeated exposures is detected and the pattern image to be outputted can be determined in compliance with a difference of changes." It is respectfully submitted that nothing in these passages, even in combination with FIG. 46 and FIG. 47 discloses or suggests applying at least one distinct spatial modulation to, **and only to**, at least one respective single-colorant version of at least one of the conflicting colors as is implied by the Office Action.

Column 32, lines 8-13, indicate that "since an input level dividing means for dividing the voltage level of analog electric signals converted by the photoelectric conversion devices with a desired threshold value in a plurality of steps and a pattern setting means capable of setting, as required, different pattern images in a monochrome color or a plurality of colors for respective input levels divided by the input level dividing means in image formation are provided, the color portions of the original can be clearly represented without using the sensors for discriminating colors." It is respectfully submitted that nothing in this cited portion discloses or suggests applying at least one distinct spatial

modulation to, **and only to**, at least one respective single-colorant version of at least one of the conflicting colors, thereby ensuring that all single-colorant versions of colors in the image are visually distinguishable from one another, as is implied by the Office Action. According to the method of Koburagi, colors that have the same luminance level are assigned the same pattern (FIG. 44, FIG. 45). Therefore, it is respectfully submitted that Kaburagi does not disclose or suggest ensuring that conflicting colors are visually distinguishable from one another in a single colorant version of an image.

Column 32, lines 14-20, indicates that the fifth embodiment of Kaburagi "enables to more clearly represent the image with the gradation represented by using the conventional dither method, clearly output a portion of the image of which representation of the gradation effect has been difficult as a pattern image, and obtain clearer image outputs in use of a facsimile machine and a binary printer." It is respectfully submitted that the cited passage does not disclose or suggest applying at least one distinct spatial modulation to, **and only to**, at least one respective single colorant version of at least one of the conflicting colors, thereby ensuring that all single-colorant versions of colors in the image are visually distinguishable from one another while minimizing distortions in a remainder of the single-colorant version of the image, as is implied by the Office Action.

For at least the foregoing reasons, it is respectfully submitted that **claim 4**, as well as **claims 5-9**, which depend therefrom, is not anticipated by Kaburagi.

Additionally, the remainder of the cited portions of Kaburagi does not disclose or suggest the portions of **claim 4** for which they were cited. Column 21, lines 45-47, indicate that "if the input image dependent mode is determined in step S400, the pre-scan for reading the original is carried out in step S1100. In step S1200, a histogram is generated with sample point pixels. In step S1300 it is determined whether the color mode is for two colors or three colors." Reference number 816 is associated with a histogram memory in FIG. 27. Column 7, lines 63-65, indicate that "density information is generated by the above two kinds of processing in accordance with the hue and the vividness or the brightness, that is, the saturation." However, these disjointed and widely separated portions of Kaburagi, even if fairly combinable (which is disputed) do not disclose or suggest histogram information from a multi-color color space

image wherein bins within the histogram classify image pixels based on luminance information and hue information, as is implied by the citations of the Office Action. Column 13, lines 45-51, which are part of a description of a second embodiment of Kaburagi (column 9, line 15; column 14, lines 20-22) indicate that seven peaks depicted in FIG. 17A "indicate that seven colors are used in the whole image (original). In FIG. 17A, it is easily known that two colors, magenta and yellow, showing the largest peak values at the right and left symmetrical positions to the reference axis are represented as the same color with the same density since these colors have the same height of peak (FIG. 17B)."

However, it is respectfully submitted that Kaburagi does not disclose or suggest classifying peaks within a histogram that have similar luminance as conflicting colors.

Moreover, Kaburagi goes on to indicate that "in this case, therefore, the reference axis is shifted to one of these largest peaks as shown in FIG. 17C. Consequently, the density values of these two points (magenta and yellow) can be changed. Specifically, as shown in this example (FIG. 17C), magenta can be made more dark than yellow by shifting the reference axis to the peak of magenta and a full-colored image can be represented in different densities (FIG. 17D)." It is respectfully submitted that this shifting of axis is part of an embodiment that is completely different than the embodiment described with reference to FIG. 46 and 47 in columns 31 and 32. Furthermore, even if the cited portion of column 13 could be fairly construed as classifying peaks within the histogram that have similar luminance as conflicting colors, the embodiment that includes this histogram processing (column 13) shifts the reference axis and, therefore, changes the densities associated with all the colors in an image. Accordingly, the embodiment described at this portion of column 13 does not disclose or suggest applying at least one distinct spatial modulation to, **and only to**, at least one respective single-colorant version of at least one of the conflicting colors.

For at least the foregoing additional reasons, **claim 4**, as well as **claims 5-9**, which depend therefrom, is not anticipated by Kaburagi.

With regard to **claim 6**, the Office Action again directs the attention of the Applicant to FIGS. 46 and 47 and portions of column 31 and 32 discussed above. However, **claim 6** recites wherein applying spatial modulation further comprises

associating a unique modulation to the single-colorant versions of each of the conflicting colors. Even if the fifth embodiment of the methods of Kaburagi, which is described in the cited portions of columns 31 and 32 with reference to FIGS. 46 and 47, could be construed as being concerned with conflicting colors or colors having the same luminance (which is disputed), Kaburagi discloses applying the same pattern to colors associated with the same luminance. Therefore, Kaburagi does not disclose or suggest applying a unique modulation to the single-colorant versions of each of the **conflicting colors**.

For at least the foregoing additional reasons, **claim 6** is not anticipated by Kaburagi.

With regard to independent **claim 10**, the Office Action again attempts to combine elements from the very different second and fifth embodiments of the method of Kaburagi. Even if column 13, lines 45-51, could be fairly construed as disclosing finding and classifying conflicting colors (which is disputed), Kaburagi does not disclose or suggest adding spatial modulations to single-colorant versions of the colors identified at column 13, lines 45-51. Instead, Kaburagi discloses moving a reference axis thereby affecting the densities of all the colors in the image (column 13, lines 52-65). The patterns discussed in columns 31 and 32 and depicted in FIG. 46 and 47 are applied to all the colors of the image (see FIG. 44 and its reference to all luminance levels from 00H through FFH). Therefore, it is respectfully submitted that Kaburagi does not disclose or suggest an image processor operative to generate a single colorant version of a color image, the single colorant version including modulations **only where necessary** to distinguish between conflicting colors, the image processor comprising an image analyzer operative to find and classify conflicting colors in the color image and a grey scale modulator operative to add spatial modulations to single-colorant versions **of only the conflicting colors** within single-colorant version of the color image, as recited in **claim 10**.

For at least the foregoing reasons, **claim 10**, as well as **claims 11-20**, which depend therefrom, is not anticipated by Kaburagi.

Column 22, lines 40-52, of Kaburagi indicates that "also, the third embodiment has a discrimination means for discriminating the hues on the axis of the density gradiant to be used for color separation from the input image data and a color separation means which functions based on the result of the above

discrimination and enables to carry out two-color copying of the second color, whether of the black/red original or the blue/black original, in the second developing color which is currently set since the hues included in the input image data can be automatically discriminated and changed to the most suitable hues for color separation in the color separation means for coinciding the hues on the axis of the density gradient of the image data with the hues of colorants to be used in image formation." It is respectfully submitted that the cited portion of column 22 does not disclose or suggest a color relationship discriminator that is operative **to receive conflicting color classification information** from an image analyzer and color image pixel information, the color relationship discriminator operative to determine a relationship between the color image pixel and the conflicting color, as is recited in **claim 13** and implied by the Office Action.

For at least the foregoing additional reasons, **claim 13** is not anticipated by Kaburagi.

As indicated above, column 31, line 63 – column 32, line 11, indicates that according to the fifth embodiment of Kaburagi, "if a plurality of colors can be developed, the pattern is determined independently in accordance with the color. If monochrome photoelectric conversion devices are use, exposure is repeated several times by varying the light quantity of the exposure means, a change of signals from the photoelectric conversion device due to repeated exposures is detected and the pattern image to be outputted can be determined in compliance with a difference of changes. Since an input level dividing means for dividing the voltage level of analog electric signals converted by the photoelectric conversion devices with the desired threshold value in a plurality of steps and a pattern setting means capable of setting, as required, different pattern images in a monochrome color or a plurality of colors for respective input levels divided by the input level dividing means in image formation are provided, the colored portions of the original can be clearly represented without using the sensors for discriminating colors." It is respectfully submitted that this cited portion of columns 31 and 32 does not disclose or suggest a spatial modulation attenuator operative to attenuate grey scale modulation based on the relationship between the color image pixel and the conflicting color. It is respectfully submitted that dividing an input voltage level does not disclose or suggest attenuating a

modulation or pattern.

For at least the foregoing additional reasons, **claim 14** is not anticipated by Kaburagi.

FIGS. 46 and 47 and the related discussion cited in columns 31 and 32 suggest representing luminances with patterns. The cited figures and cited portions of columns 31 and 32 do not disclose or suggest spatial **modulation** of grey scale values based on a relationship between a color image pixel and a conflicting color. Accordingly, it is respectfully submitted that Kaburagi does not disclose or suggest the spatial modulation generator recited in **claim 15**.

For at least the foregoing additional reason, **claim 15** is not anticipated by Kaburagi.

Claim 16 recites the relationship between the conflicting color and the color image pixel comprises a color distance within a color space. It is respectfully submitted that the distance between a reference axis and magenta and yellow discussed at the cited portion of column 15, does not anticipate the color distance between a conflicting color and the color image pixel recited in **claim 16**.

For at least the foregoing additional reason, **claim 16** is not anticipated by Kaburagi.

Acknowledgement that **claims 17** and **18** recite allowable subject matter is, again, noted with appreciation.

Independent **claim 21** was rejected for reasons similar to those presented with regard to **claims 1** and **10**. Accordingly, arguments similar to those submitted in support of **claims 1** and **10** are submitted in support of **claim 21**. FIGS. 46 and 47 and the cited portions of columns 31 and 32 discuss representing matching lightnesses with matching patterns. Accordingly, the cited portions of Kaburagi do not disclose or suggest examining the image to find conflicting colors in the image and selectively spatially modulating a portion of the single colorant version of the image that is associated with one of the conflicting colors. The method associated with the second embodiment of Kaburagi discussed at column 13 shifts a reference axis thereby changing the density of many colors of an image. The method according to the fifth embodiment of Kaburagi, that is discussed in columns 31 and 32 with reference to FIGS. 46 and 47 associates patterns with luminances (e.g., see FIG. 44). Accordingly,

Kaburagi does not disclose or suggest examining the image to find conflicting colors in the image and selectively spatially modulating a portion of the single-colorant version of the image that is associated with one of the conflicting colors as is recited in **claim 21**.

For at least the foregoing reasons, independent **claim 21**, as well as **claims 22** and **23**, which depend therefrom, is not anticipated by Kaburagi.

Telephone Interview

In the interests of advancing this application to issue the Applicant(s) respectfully request that the Examiner telephone the undersigned to discuss the foregoing or any suggestions that the Examiner may have to place the case in condition for allowance.

CONCLUSION

Claims 1-3 were withdrawn with traversal. **Claims 4-23** remain in the application. **Claims 4-9** and **21-23** have been amended. For at least the foregoing reasons, the application is in condition for allowance. Accordingly, an early indication thereof is respectfully requested.

Respectfully submitted,

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specification refers to FIG. 42, it means to refer to FIG. 43, where the specification refers to FIG. 43, it means to refer to FIG. 44, and so on.

Telephone Interviews of Early 2004

During a telephone interview held on or about January 22, 2004, the then Examiner, Montilewa Good-Johnson, and the Applicant's representative, Thomas Tillander, discussed proposed claim amendments and the Kaburagi reference. Mr. Tillander made reference to column 13 of Kaburagi, as discussed above, wherein Kaburagi explains that in the method of Kaburagi when colors having the same "density" are detected, Kaburagi solves the problem of such same color presentation by setting the parameters (the reference axis and the range of density spreading), which prevent the same color production (column 13, lines 9-17). Mr. Tillander submitted that Kaburagi does not disclose or suggest applying spatial modulation to, for example, the magenta and/or yellow portions of an image so that a black and white version of the image can be made with a minimum of distortion. Instead, Mr. Tillander pointed out, Kaburagi changes the reference axis and the range of density spreading, which has the effect of distorting the luminance of all the color of an image (column 13, lines 53-60).

The reference to column 31 of Kaburagi of the then pending Office Action, as well as the Office Action of November 18, 2003, was also discussed. The reference section is related to the patterns shown in FIG. 46. Mr. Tillander submitted that FIG. 44 makes it clear that Kaburagi discloses applying a pattern for every luminance level in an image and **not just to conflicting colors**. Furthermore, Kaburagi discloses applying **the same** pattern to colors having the same luminance (i.e., conflicting colors) (e.g., FIG. 44 shows all colors having luminance values in the range of 00H to 10H are assigned the pattern associated with (0, 0, 0) in FIG. 46) **and does not disclose or suggest applying different or distinct patterns to one or more black and white version of one or more conflicting colors**.

Independent claims 4, 10 and 21 were discussed in view of the information described above. Mr. Tillander submitted that, in a proposal amendment, claim 4 included applying spatial modulation only to black and white versions of one or more conflicting color and not to colors that don't conflict. Similar elements in claims 10 and 21 were also discussed.